

GROUP 3: SCENARIO 4 Urban Agriculture At UBC You Bet!

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AGSC 450

April 8, 2005

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INTRODUCTION

Where do your priorities lie? Is university only about academics and research? Or, is it a place where people learn about the world and each other, form relationships: a place where people live their lives? These two questions dominated the thoughts leading up to the creation of the following paper. In the end, in light of the future UBC “university *city*” we have decided that UBC is about community. With this settled we attacked our scenario with vigor. As a new initiative within the UBC FSP, scenario 4 is designed to tackle the beast that is UBC Campus and Community Planning. Four groups worked on this scenario, our group focused solely on the Main Campus Plan (MCP). Although it has no legal authority at this point, it is the umbrella document for all planning and development at UBC. Uniquely, it does not propose specific plans but only strategies that serve to guide the physical layout of the UBC Main Campus.

Our original problem statement was to explore the existing opportunities and barriers in implementing urban agriculture on the UBC Campus in regards to the MCP. This led to another set of questions: Does the MCP even include urban agriculture in its current form? Is urban agriculture important for UBC? And, if so, why and how can we incorporate it into the UBC Main Campus Plan?

Our discovery that the MCP did not include the UBC food system led us to revise the problem statement and undertake a wide variety of research to help us answer our questions. Our role required us to understand the history of UBC and UBC planning, to analyze the MCP and discover emergent themes that would influence our attempt to incorporate Urban Agriculture on campus, to assess the importance of Urban Agriculture, to find a local example of successful inclusion of urban agriculture into official planning documents, and finally to network within the UBC community. The following paper

outlines our findings and concludes with a *How-To-Guide* for future AGSC students as they continue to make the goal of UBC sustainability a reality.

History of UBC

UBC is located on the traditional territory of the Musquem First Nations Community. The Musquem have inhabited Point Grey for thousands of years. They used the forest as their hunting ground and the beach as their pasture. For the Musquem community, the land itself was and is still a place for education and growth (UBC-FAS, 2005). The same can be said for UBC as agriculture has continually played an important role in the development of the UBC campus. The 1992 *Main Campus Plan* states: “ the planning issues being faced today are rooted in history” (MCP, 1992, p.8) And, the foundation of UBC is clearly agricultural.

Therefore it is hardly surprising that the Faculty of Agricultural Sciences has one of the longest histories at UBC and is one of its founding members. In 1915, the Agricultural Science students and staff were instrumental in clearing debris to prepare land for the implementation of the *Grand Plan*¹ made by Sharpe and Thomson in 1914 (MCP, 1992). At this time, planning was greatly influenced by the *Garden City* movement that valued an intimate relationship between people, structure and environment (MCP, 1992). In response to this as well as public and private demand and values, most of the current campus landscape was used for research and education in animal and crop husbandry (MCP, 1992). Therefore, the UBC farm and the associated agriculture research and education were at the heart of the university (MacKenzie, 1958). The farm was first established along what is now West Mall, directly west of the chemistry

¹ The Grand Plan was the result of the first UBC Campus Planning Effort. Its stated goal was to organize the campus and situate an “academic core surrounded by supporting uses” (MCP, p. 10); to create a “university city in an idyllic setting with groups of buildings, so arranged that they lead up to one harmonious scheme” (MCP, p. 10).

building. As the university expanded to accommodate a growing student population, agriculture activities shifted from the main campus towards mid-campus area. Despite the growing focus on real estate development leading up to the 1968 Master Plan, the document still reveals UBC's early agricultural bias: "the campus (should be) developed as a great and varied garden" (MCP, 1992, p.18). However, in the mid-1970's, development planning shifted agriculture from mid-campus across 16th Ave to South campus (UBC-FAS, 2005). This geographical movement away from the centre of the UBC campus corresponds with a paradigm shift in the university's values and priorities. Slowly the agricultural foundations of the university have been replaced, eroded and ignored.

The history of planning at UBC is almost as extensive as the history of the UBC as they are fundamentally linked. The *Grand Plan* of 1912 was the first of a long series of documents aimed to outline the goals of the quality of the education and the visual acuity of UBC's campus. Key elements of this plan contributed to the three boulevards (now East, West and Main Malls), a uniform architectural scheme for all-purpose buildings (The Main Library and the Chemistry building), and an emphasis on the structure as 'a whole' by integrating buildings and landscapes. From 1925-1958, five more Campus Plans came out to extend the 1912 plan. In 1959, the *Development Plan* identified general land uses for an enlarged campus and identified three separate areas of campus (North, Center and South campus). In response to increased car use, parking lots were created. But, the most rapid growth in UBC's history was in the 1960's. Student enrolment doubled and an astonishing fifty buildings and extensions were constructed after the *Master Plan* of 1968. These additions included: intensification of the academic core with high-rise buildings; establishment of a road

network and the development of covered walkways along Main Mall; and a proposed landscape of an interconnected series of plazas and gardens. In an attempt to re-establish a sense of order on campus and focus on the historical aspects of the UBC campus, the *Campus Development Proposal* was put together in 1982. This plan extended the academic zone from Agronomy to Thunderbird Boulevard, recognized the potential for substantial development within the academic core, and re-emphasized the idea of a walking campus. Development procedures were to mirror a municipal planning model and to encourage public realm improvements associated with all new developments. By the end of the 1980's, development at UBC began to grow in intensity again (UBC-FAS, 2005).

In preparation for a busy decade of construction the university decided to create a plan that would guide all campus development. The *Main Campus Plan* (MCP) is the product of a cumulative process of analysis and synthesis that began in 1989, and ended in June 1992. This process included an initial period of general commentary and discussion, followed by three successive drafts and revisions involving members of the University and the larger community. Every attempt has been made to produce a comprehensive and flexible plan addressing functional, aesthetic, and contextual issues. On September 17, 1992, the board of Governors approved the MCP (MCP, 1992).

OVERVIEW OF MAIN CAMPUS PLAN

Rooted in the history of the UBC Campus and guided by the afore-outlined planning process, the UBC MCP outlines principles and strategies to guide the long-term growth, development and management of the UBC Main Campus.

The report begins with the Executive Summary and moves on to briefly outline the forty strategies that have been developed; strategies that have and continue to

guide development, management and growth on the UBC Main Campus. These strategies are broken into four sections: general, systems, land-use and implementation.

Section 1 summarizes the Planning Foundations of the UBC MCP. This section states the role, context and scope, and development history of UBC Planning. Here it is re-iterated that the MCP's purpose is to enable "the goals and decisions of the University to be realized". Later, this idea is narrowed; "the MCP focuses on the *physical environment* necessary to nurture and support the university's Mission"; "the MCP sets out the principles and strategies necessary for translating the academic, financial and community goals of the University into *physical form*" (MCP, 1992, p.2-3). These statements make it clear that if change is to occur in any fundamental manner it must come from the missions and strategies outlined in the MCP.

The MCP's Mission Statement can be found on page 7. Twice a three-pronged economic, social and cultural development tactic is mentioned as providing an arena for the "inter-relationship between disciplines...links between the humanities and the sciences." It is startling, given the university's stated commitment to "environmental responsibility," that the tactic is not four pronged to include the environment (MCP, 1992, p.34). Also, it is surprising, given the popularity of the sustainability concept in current academic discourse that it is not present in any form in the Mission Statement. In future planning documents, sustainable development that respects the environment merits further attention.

Throughout the document several important themes emerge. The Executive Summary explains that the document envisions the campus as part of a "cohesive whole" and states explicitly that a central tenet of the document is that "the campus whole is greater than its parts" (MCP, 1992, p.i). This idea of cohesion becomes

important when changes are proposed; it follows that sustainable, long term changes must flow from a shift in UBC's identity and values. Superficial alterations will not last unless they are grounded in the identity and vision of UBC as found in the MCP.

A second theme found in the Executive Summary is the idea of flexibility. Realizing that campus values and needs change over time "the Campus Plan must be sufficiently flexible to respond to its own evolution" (MCP, 1992, p.i) Planning strategy 38, the *Campus Development Process*, states "the process is being revised...(so as to be) effectively monitored at each stage" (MCP, 1992, p.xi) Strategy 39 also commits to "regular modification" so the planning process can remain effective and relevant to the changing needs of the UBC Campus.

It is important to note here that the MCP was created in 1992 long before the concept of a "university city" was created. Contradictory to the statement made on page 4 that says that the plan will remain "sufficiently current and relevant...to accommodate genuine evolution" (MCP, 1992, p.4) the campus plan has not been revised since its creation 13 years ago! With no revisions and a specific revision date yet to be determined, it is imperative that the university seriously consider updating the plan to correlate current development with the changing goals of the UBC campus.

Building from this theme of evolution is the third major topic of community needs. This theme is found in Strategy 3 and later on page 27 where the MCP states, "(the) ongoing needs of the university community must be met." Over time it is specifically "community needs" that will evolve as the university moves towards its new vision as a 'university city' with an increased number of permanent residents. UBC values have and will change. The demographic changes that parallel the move towards this vision of a university "city" with mixed-use housing and a larger permanent on

campus population will necessarily result in a changing definition of campus community and likewise, UBC's 'needs'. This metamorphosis must be reflected in the revised campus plans through broad changes that guide the creation of the updated Official Community Plan (OCP).

A fourth theme that weaves into the narrative of the MCP is the idea of working with existing structures. When discussing mid to long range planning, it is clear that "care has been taken to build on what exists" (MCP, 1992, p.ii) and "new development should reinforce existing places" (MCP, 1992, p.iv) instead of moving in revolutionary ways. This theme will be a key consideration for those wishing to incorporate new ideas into the plan. Instead of trying to reinvent the campus it will be important that all proposals focus on how to increase the vitality the existing buildings and living landscape of UBC. Strategy 7 highlights the fact that because of limited space, "buildings with a greater number of overlapping values" make more efficient use of the UBC landscape (MCP, 1992, p.44). But, the MCP confines landscape to "aesthetic value", thus reducing the possibility for enhancing the quality of UBC through changes to the living landscape (MCP, 1992, p.49).

The integrity of the diverse nature of campus uses represents the fifth theme. Strategy 13 describes how the MCP seeks to move away from focusing solely on the academic core and advocates "close proximity between different and related uses" (MCP, 1992, p.69). However, including holistic terminology in a guiding document such as the MCP does not necessarily correspond with holistic development on the ground. Integration of the diverse needs required by a changing UBC community is another factor that must be considered to shape changes to the MCP.

Finally, to tie the previous themes together, the MCP reaffirms that UBC is “an educational servant and intellectual leader to Vancouver, British Columbia and the wider community” and thereby adamantly argues that development must “demonstrate high respect for the environment” in two primary ways: creating and following through on environmentally sound development plans *and* increasing the awareness of its community (MCP, 1992, p.34). The successful implementation of such plans (development plans that address environmental respect) will only be possible if development stems from the evolving needs of a changing UBC community that is grounded in UBC’s developmental history. Strategy 10, the *Campus Landscape*, highlights the tradition of development at UBC as an academic resource stemming from UBC’s agricultural roots. It is here that the MCP advocates the creation of a *Comprehensive Landscape Master Plan*. Thus, changes to the design of UBC’s living environment have been anticipated and could be easily incorporated into a revised MCP.

In 2005, the MCP is still a work in progress. Many strategies proposed in the plan have either been implemented or are still under construction. Many institutional buildings have been built in the past thirteen years. For example, Green College was established in 1993, the Student Recreation Centre in 1995, C.K. Choi Building in 1996, Forest Sciences Centre in 1998 and the new Life Sciences Center in 2004. However, the transportation system at UBC is currently undergoing the modifications outlined in Strategy 23 and the Main Library is currently being redeveloped as proposed in Strategy 28. In addition to this institutional development, there has been and continues to be intensive development outside the academic core.²

² Different community plans guide this non-institutional development such as the official community plan (OCP), the comprehensive community plan (CCP), and the various neighborhood plans. For the purposes of this paper, only the Main Campus Plan (MCP) will be addressed.

To co-ordinate all of this campus development with the changing values and uses of the UBC campus, the 1992 MCP was scheduled for revision in 2004/2005. However, at this moment, the exact date of its revision still has not been set. The Community & Land Use Planning Committee currently believes that the MCP is to be reviewed during 2006. At this later date, the whole document will be reviewed in detail and certain strategies will be modified or enlarged to develop a new plan that will encompass revisions to the OCP and the comprehensive Community Plans as well.

Urban Agriculture

Urban agriculture is not a new concept. In various local forms, it has been in existence for centuries. Today, many cities rely on it as a major source of food, especially those in developing countries where approximately 50% of those living below the poverty line live in urban areas. By providing an inexpensive way to acquire food and earn some money, urban agriculture helps these people to fight poverty and hunger within their urban context (Addison, 2005). As such, urban food production has become a necessity for people living all over the world. The United Nations has defined urban agriculture as,

“An industry that produces, processes and markets food and fuel, largely in response to the daily demand of consumers within a town, city, or metropolis, on land and water dispersed throughout the urban and peri-urban area, applying intensive production methods, using and reusing natural resources and urban wastes, to yield a diversity of crops and livestock” (Barrs, 2002, p. 3).

In 1993, urban food contributed to 15% of world food production (Addison, 2002).

Although the Canadian food system relies on both local and global food sources, this global movement towards urban agriculture has recently been incorporated into intensely local planning and development such as the Southeast False Creek Plan (SEFC) that includes a specific Urban Agriculture Strategy. The SEFC plan defines urban

agriculture as the production of food, medicinal herbs, ornamental plants and fuel-wood in the urban environment (HBPG, 2002).

With the growing strain on the earth's resources the movement towards urban agriculture can benefit communities nutritionally, socially, environmentally and ecologically (HBPG, 2002). Members of a community are brought together to produce for themselves and the surrounding community. This relationship connects people to the land. Thus, community gardens are not only centers of production but serve educational and recreational purposes as well. There is an increasing demand, especially in Vancouver, for healthy, organic and affordable produce in local markets. The convenience of local farmers markets decreases the amount of time food and people travel and related expenses (HBPG, 2002). In addition to these decreased costs, urban agriculture provides people with job opportunities and encourages local economic development.

Urban agriculture often focuses on the production of herbs, vegetables, and fruits. This will lead to a decrease in the consumption of protein sources such as beef, pork and chicken that require large amounts of grain and water and, subsequently, an increase in fruit and vegetable consumption, which can improve the overall health of individuals. In addition, the decreased use of commercial pesticides and other toxic substances used in industrial agriculture improves the nutritional quality of the food produced in urban gardens (HBPG, 2002). Therefore, urban agriculture increases the food security of the surrounding community by allowing people greater access to safe and affordable food (HBPG, 2002).

Although the health benefits for both land and communities create a strong incentive for local governments to promote urban agriculture, the real motivation is this:

the amount of land available for agriculture is dwindling due to urban sprawl. There is an increasing need to utilize urban green space for agriculture; this provides urban poor with food security and relieves land pressures from resource draining industrialized agriculture. Community gardens can use water and sewage waste from the surrounding community contributing to making a closed food system (HBPG, 2002). As urban agriculture decreases the distance that food travels between producer and consumer, fuel consumption and, in turn, harmful carbon emissions that have been linked with global warming decrease as well (HBPG, 2002 & Barrs, 2002). The local environment can also benefit from the increased biodiversity that urban agriculture will offer as urban agriculture provides a new habitat for birds, insects and other animals (HBPG, 2002).

Southeast False Creek Plan

The Southeast False Creek Plan (SEFC) is a community plan designed to enable community living in a sustainable manner. The current plan area is comprised of approximately 50 acres of city-owned land (bounded by False Creek, Quebec Street, Cambie Street Bridges and 1st avenue); a majority of this land has been used for industrial purposes. The study also includes 30 acres of privately owned land (between 1st avenue and 2nd avenue and between Quebec St. and Main St.). The planning documents have designed SEFC as a mixed-use community, with a strong focus on residential housing developed at the highest density possible while addressing sustainability (HBPG, 2002).

The City of Vancouver has embarked on an innovative planning exercise in order to develop a model sustainable community on the southeast shore of False Creek. The city is currently in the process of creating an Official Development Plan (ODP) for the area. The ODP will function to guide the site layout, development policy and eventually

guide the zoning of individual areas. Several sustainability studies have been carried out to assist in identifying and resolving key issues and topics that need to be addressed at the ODP stage. These studies helped the committee to understand the potential value of urban agriculture for sustainable urban communities and convinced them to develop the Southeast False Creek Urban Agriculture Strategy and incorporate it into the official planning documents for SEFC (HBPG, 2002).

There are several guiding principles for the SEFC: (1) the implementation of sustainability through the promotion of sustainable development principles in an urban setting, (2) the promotion of ecosystem health through the encouragement of resource conservation and waste reduction, (3) the creation of economic viability and vitality (4) and the support of social and community health. The fifth fundamental goal is to act as a “model” for future urban development. (HBPG, 2002)

The Southeast False Creek Urban Agriculture Strategy was developed within these guiding principles. The UA (urban agriculture) strategy analyses urban agriculture and discusses the benefits and challenges of developing an UA strategy to promote sustainability within the Southeast False Creek community. As previously mentioned, urban agriculture is defined to include not only food production activities within the urban area but also food processing and distribution opportunities. The SEFC UA Strategy outlines nine strategic objectives that are needed to help achieve these three fundamental goals: (1) increase the physical capacity of the plan to support food production, (2) increase food production both privately and commercially, (3) increase local and organic food consumption in SEFC, (4) increase food-related economic development initiatives, (5) increase the ability of SEFC to provide food security for local Vancouver residents, (6) promote sustainable waste management, (7) increase

education of stakeholders related to urban agriculture systems, (8) encourage the celebration of food and the local food systems, and (9) encourage consumption of ethically and environmentally sustainable business practices. In addition to the specific strategies for each objective, there are descriptions of a number of planning actions that will help to co-ordinate and link individual strategies with the overall SEFC vision (HBPG, 2002).

Extensive research and multilevel collaboration between planners, city officials and community-based interest groups went into the development of the SEFC Urban Agriculture Strategy. The fact that this strategy was developed in Vancouver, an area of competing interests and a previously industrial focus demonstrates that urban agriculture has become an important consideration for local planners. It also shows that urban agriculture can be incorporated into official planning documents. The 5th Goal of the SEFC's ODP is "to act as a 'model' for future urban development." Thus, SEFC's Urban Agriculture Strategy can act as a prototype for urban agriculture development at UBC (HBPG, 2002).

Though the MCP and SEFC state different goals³, SEFC demonstrates that urban agriculture practices in interstitial spaces are possible and they can complement the primary function of either community. The obvious distinction between SEFC and UBC is that urban agriculture will have to work within the existing infrastructure and the institutional framework of the UBC Main Campus, while the SEFC Plan is working to create a new community with a vision of sustainability that will include urban agriculture from the beginning. In addition, UBC has a different constituent than SEFC. Currently, the UBC Main Campus comprises of students, faculty and other staff whereas the SEFC

³ The SEFC plan is specifically residential whereas the UBC Main Campus is primarily academic.

area is primarily residential housing accommodating many families. Also, due to differences in historical and current uses, sustainability techniques must be specific each site. For example, a large backyard garden is not a viable idea in the middle of the UBC Main Campus but it could be a practical strategy for the SEFC community. Despite the fact that there are both benefits and challenges in applying sustainable urban agriculture from the SEFC “model” community to UBC, the SEFC UA Strategy demonstrates that urban agriculture is important. And, despite competing interests and feasibility concerns over valuable land in Vancouver, urban agriculture at SEFC was deemed necessary enough to be incorporated into official planning documents. But, incorporating urban agriculture into planning documents is not simply a local phenomenon; it is national and global too (HBPG, 2002).

Urban Agriculture Strategies For UBC Main Campus

Based on the analysis of UBC’s Main Campus Plan and the importance of urban agriculture as shown through the SEFC efforts to include urban agriculture in their planning strategies, we have analyzed the applicability of urban agriculture for the UBC campus. Three key areas have been identified for future planning initiatives on the UBC Main Campus: (1) Micro-gardens; (2) Education and Community Involvement; and (3) Waste Management. These are three areas that could and should be targeted in order to incorporate successful urban agriculture into the MCP and the UBC main campus. The purpose of this section is to provide realistic strategies that should be considered during the current and future planning and development of a sustainable UBC community.

1. Micro-gardens:

The development of micro-gardens could contribute to the production aspect of urban agriculture. These gardens are diverse in form and easily conform to existing

locations. Examples include: small plots around buildings, greenhouses and rooftop gardens. The maintenance of micro-gardens across campus could be the responsibility of volunteer students such as students from the LFC series, or as part of course requirements.

Small plots of land are in abundance across the UBC Main Campus, which could easily be used to grow edible plants, such as vegetables and herbs. Following the development of community gardens, these areas could be placed in a "Land Trust" in order to secure their future existence. Taking garden land plots off the market will protect and maintain their purpose on campus both now and in the future (Roseland, 1999).

Greenhouses could potentially be a more substantial source of food for the UBC community and UBC food outlets as well as providing spaces for research and education. As a local example, SFU has a community garden as well as greenhouses on its campus. The garden is organized by the "Residents and Housing Department" of SFU and is currently operating at full capacity (Connolly, 1997).

The implementation of balcony gardens could be encouraged in both existing buildings such as Macmillan, the current location of the Faculty of Agricultural Science, and in future building development plans. Existing buildings with flat roofs make excellent candidates for rooftop gardens. An excellent example is the building housing the "99 Chairs" restaurant located on Main Mall. Not only could food be produced from its rooftop garden, but food could also be processed and sold for consumption in the restaurant. Buildings such as this will undergo structural upgrading that could include improvements in order to support the extra weight of rooftop gardens as well as to ensure reliable waterproofing (Roseland, 1999). Future building roofs should be

designed to carry plant life as well as be positioned for maximum sun exposure (Sheltair Group, 1998). This has been done successfully at the "Vancity Place for Youth" building in Vancouver (Sheltair Group, 1998).

The inclusion of various types of micro-gardens on campus will have environmental, economic and social benefits as well. To name a few, air quality will improve with a decrease in CO₂ emissions, building insulation will improve, and the economic value of buildings will increase (Roseland, 1999). Producing food close to where it is consumed could also reduce energy and resources used in transporting food, as well as the pollution produced from transportation.

2. Education and Community Involvement:

Lack of awareness and knowledge of the urban agricultural movement on campus may impede the successful development of a sustainable campus. For example, many people in the UBC community lack the skills needed to maintain gardens, or are unaware of existing resources provided by UBC farm. The goal of educating students, faculty, and residents of UBC and increasing community involvement is to encourage people to become a part of the food system at UBC. In this way people are empowered to effect changes in their own food system as they help to produce, process and consume materials and products from their food system.

The following strategy is a comprehensive approach that links education to food processing on campus. An important aspect of urban agriculture is food processing, which includes canning fruits and vegetables, making sauces, soups, mixes, entrees, breads, smoking and dehydrating foods. Foods processed on campus could be sold to food outlets on the main campus or sold at farmer's markets at the UBC farm. Food

could also be processed on campus for workshops or seminars held at UBC. Lastly, students, staff and residents could use these processed foods for personal consumption.

The first component of this processing strategy is a “commercial food processing facility” (HBPG, 2002, p. 98). This would consist of a large shared kitchen equipped with basic ware such as exhaust fans, sinks, grease traps and tables (HBPG, 2002). Small food processors or caterers could rent out this space as needed. The facility might have to be subsidized in the beginning until enough tenants use the resource to cover costs of running it. To minimize costs, however, the Dietetics food lab in the Family and Nutritional Sciences building on campus could be expanded for this exact purpose. Those involved in food production at the UBC farm could then process their crops into higher value products. In this way farmers would save money because they would not have to ship their crop to far-away processors and transportation-related environmental impacts would be minimized (HBPG, 2002). Interestingly, research has shown that two people working for three days making apple-sauce from 36 cases of apples can earn the equivalent of 45 days of wages as a retail store clerk (Integrity Systems Coop Co., 1997). Thus, in addition to being a center for education and research, the processing facility could provide an income to people in the UBC community.

The second component of this strategy is a “Food Incubator”, in other words, a training facility where food growers, processors, retailers, students and residents of UBC could gain the skills needed to practice urban agriculture on campus and enter their food system (HBPG, 2002, p. 102). People can learn how to can food, where to get local food, how to compost, earn food safe certification, take cooking classes and become aware of resources offered at the UBC farm. The previously proposed commercial kitchen could be used as this training facility for the educational purposes listed above.

And, the afore-mentioned micro-gardens could provide the space and educational opportunity to showcase lessons in composting, water conservation, or gardening techniques (HBPG, 2002). Lastly, the *food incubator* is a site where food outlet owners and managers could join together to form *marketing cooperatives* that would enable them to order more of the same item to save money (HBPG, 2002). By sharing the cost of supplies, equipment and food items and with the pressure of an educated UBC community, food outlets could afford to buy local and organic produce, meats, and dairy.

The *commercial food processing facility* and *food incubator* are components of the official SEFC Urban Agriculture Strategy. Another example of urban agriculture that is already providing benefits and opportunities for communities in Toronto is the Toronto Kitchen Incubator (TKI), a commercial kitchen that can be rented by entrepreneurs to test ideas and produce food for the marketplace. This kitchen is very successful and is well equipped and available to tenants 24 hours a day. The TKI minimizes the financial risk for tenants and offers them entrepreneurial advice and support (Foodshare, 2004).

In learning valuable food processing skills and gaining knowledge about the UBC food system in general, students and residents at UBC could engage in community involvement that would enable UBC to become a truly sustainable campus.

3. Waste Management:

Implementing a waste management strategy on the Main Campus of UBC could reduce food-related waste, an important step in helping the UBC food system work towards sustainability. The institutional area of UBC's Main Campus should include a comprehensive composting program, much like the program proposed for the future Southeast False Creek site and currently in use on the SFU campus. This would cut

down the amount of solid waste produced on campus. Multi-purpose containers with three different compartments for garbage, compost and recycling could be scattered across the campus in collaboration with the existing system of waster disposal (Roseland, 1999).

These compost boxes could divert organic material from garbage cans and return the soil material into the previously mentioned micro-gardens on campus. This would improve plant growth and be an investment in the production of food at UBC. At present, there are several successful local composting gardens in Vancouver, such as those found at North Shore Park and Tilford Gardens, the GVRD compost garden and the West Vancouver Compost Demonstration Garden.

Conclusion

These proposed strategies represent just three ways that the UBC community could become more sustainable. Despite the fact that these three plans could be implemented superficially on the UBC campus, sustainable and truly effective change must ultimately stem from UBC planning documents.

UBC is about community; and, as this community moves towards the goal of a "university *city*" its needs will change accordingly. Food is and will be an integral part of the current and future UBC communities and therefore it must be reflected in UBC's Main Campus Plan as the overarching planning document for all UBC development.

UBC's obvious agricultural history, the emergent themes stemming from our analysis of the 1992 MCP, the demonstrated importance of urban agriculture and the successful integration of urban agriculture into the Southeast False Creek official development plans lead us to conclude with enthusiasm that urban agriculture not only

could but should be integrated into the MCP as it comes up for revision in the near future.

Attached to this paper is a How-To-Guide for future AGSC students. It is our desire that this guide will enable them to continue our work in transforming the goal of UBC sustainability into a concrete reality.

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A How-To Guide: Incorporating Urban Agriculture into the UBC MCP

This guide works within the context of the previous report: the history of UBC and its planning history; the current planning process in regards to food system sustainability on the UBC Main Campus (or lack of one!); the summary of the current MCP; the importance/relevance of urban agriculture in general and specifically for UBC; and the successful incorporation of urban agriculture into the SEFC planning documents. The purpose of this guide is to enable future students, faculty, researchers, developers and/or residents to affect changes in the UBC MCP.

Our hypothetical situation assumes that the MCP plan is up for revision and that team Alfalfa (comprised of any combination of the UBC community members) has researched the applicability and feasibility of introducing **rooftop gardens** to the UBC campus. Team Alfalfa has compiled a detailed report on rooftop gardens outlining a proposed addition to the UBC Main Campus.

This How-To Guide consists three documents: a letter that highlights the major points of the previous paper and will help team Alfalfa convince the UBC MCP revisal committee of the

necessity of urban agriculture and rooftop gardening; a "Plan of Action" that is loosely based upon the experiences of group 3 and the planning committee that created the SEFC Urban Agriculture Strategy; and finally, a list of contacts that will help the team network and form relationships.

January 21, 2013

Main Campus Planning Revision Committee

To Whom It May Concern:

We eagerly anticipate the UBC Main Campus Plan revision. This letter aims at offering suggestions and recommendations of implementing urban agriculture into the Main Campus Plan at the University of British Columbia. UBC's history highlights the profound role that agriculture has played in the planning and development of the campus. At one point in time, research and development were based solidly in the agricultural needs and demands of UBC and the surrounding community; and, the UBC farm was at the heart of on campus activity. Over time the goals of UBC diverged from their original agricultural foundation and agricultural pursuits slowly lost value. We believe that urban agriculture is an important element that needs to again be included in the Main Campus Plan.

Urban agriculture involves the production, processing and marketing of food and fuel, largely in response to the daily demand of consumers within a town, city or metropolis. Urban agriculture can provide food for communities and help to reconnect them with their environments, helping to fight poverty and hunger. In order to fulfill UBC's vision of becoming a sustainable 'university city', urban agriculture must be incorporated into future Main Campus Planning. It could provide local, accessible, nutritious food for the university community; it could provide a means of

integrating the goal of research and development into campus life; and it would also enhance UBC's economic, social and environmental sustainability.

Urban agriculture has been effectively implemented in a number of development plans. The Southeast False Creek Plan (SFCP) is a community plan designed to create a sustainable community through implementing urban agriculture in a densely populated, economically valuable neighborhood. The successful incorporation of urban agriculture into the SFCP demonstrates the plausibility of integrating urban agriculture into the Main Campus Plan.

Based on our analysis of UBC's Main Campus Plan and various local and global examples of urban agriculture, we have identified **rooftop gardens** as a practical future initiative for UBC. As a form of Urban Agriculture rooftop gardens: complement planning objectives that work towards food sustainability; work within existing structures at UBC; incorporate the ideals of community involvement and heightened awareness; and will help to demonstrate that the long term growth, development, and management of the UBC main campus is based upon principles that value UBC as a community, with changing community needs that include a local, sustainable food system. Only with a sustainable food system can UBC become a true leader and model in sustainability for the rest of the world.

Sincerely,

Group # 3
Spring 2005 AGSC 450

How To Guide

PLAN OF ACTION: Implementing Urban Agriculture into UBC

When students want to implement urban agriculture at UBC there are a few important things to take into consideration. UBC has a planning and development history and process that extends beyond the scope and ability of a single person. Students wishing to change a specific component of the UBC food system must read the detailed analysis of the MCP outlined in the previous paper and work within the 6 emergent themes outlined in that document. Implementing urban agriculture at UBC will also involve cooperation with UBC and its the stakeholders; dedication to the objectives and guidelines of the planning committee; a sustained focus on the MCP in planning, design and programming of development; and finally referencing the fundamental goals and recommendations developed by students in previous years. The following is list of steps next year's AGSC 450 students could pursue in fulfilling their dream of a sustainable urban agriculture system at UBC.

- 1) Create a policy statement regarding which urban agriculture options UBC will employ so that stakeholders are in line with UBC's level of commitment to sustainable food activity.
- 2)
 - a. It would be necessary to review current regulations and bylaws that are currently in place that would possibly restrict urban agriculture procedures.
 - b. Create proper regulations and by-laws that would allow the urban agriculture strategies that UBC is researching to be implemented.

- 3) Ensure urban agriculture is included into the site planning and design process. In other words, make sure that urban agriculture is incorporated into the revision of the UBC Main Campus Plan.
- 4) Try to use public buildings and land for demonstration projects. For example, develop a rooftop gardens in which people can visit to learn more, stress the importance of sustainability, and spark interest about future projects.
- 5) Draft incentives for UBC population to include urban agriculture into their designs.
- 6) Partner with NGO's, faculties, and businesses to develop training modules to staff, designers and urban gardeners.
- 7) In order for the implementation to work one must start with the easier options, and build success and support before moving on to more difficult options. For example, beginning with food composting as a simpler process and then move onto food incubators and rooftop gardens.
- 8) Develop a population at UBC where people value and understand where their food originates. One would want to create a situation where UBC values local food, agriculture, organic production, biodiversity and a sustainable food system. In order for urban agriculture to be implemented properly, there needs to exist a desire for it to function.
- 9) Increase awareness of the UBC food system.
- 10) Perhaps designate a member of UBC staff to act as coordinator of urban agriculture to ensure that issues and opportunities are appropriately addressed. This could be through the Campus Sustainability Office or the Land and Food Systems Faculty.

Useful Contacts

Campus Contacts- Main Campus Plan			
Name	Title	Phone	E-mail
Karly Henney	Planner- Community & Land Use Planning, Campus & Community Planning		
Rachel Wiersma	Planning Assistant, Campus & Community Planning		
Joe Stott	Associate Director- Community & Land Use Planning, Campus & Community Planning		

Campus Contact- Urban Agriculture	
Bill Rees	Director, School of Regional and Community Planning
Michael Leaf	Associate Professor
Derek Masselink	Program Coordinator, the UBC Farm
Mark Bomford	Marketing Coordinator, the UBC Farm

Urban Agriculture (Institutes)

**The Campus Sustainability Office
Land and Building Services**

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